Immediate and delayed effects of successful percutaneous mitral valve commissurotomy (PTMC) on global right ventrical function in patients with mitral stenosis with or without mitral regurgitation

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Background: Rheumatic cardiac disease is an immunologic phenomenon that may affect any of the heart valves and is by far the most common cause of mitral stenosis.
Aims & objectives: To study the immediate and delayed effects of successful PTMC on global RV function in patients with mitral stenosis with or without mild MR.
Methods: 100 consecutive patients who underwent balloon mitral valvuloplasty for rheumatic mitral stenosis between May 2013 and May 2014 at Sri Satya Sai Institute of Higher Medical Sciences Prasanthigram, Ananthpur district. All patients were subjected to clinical examination, transthoracic echo Doppler study and tissue Doppler imaging for: (A) assessment of severity of mitral stenosis; (B) assessment of systolic and diastolic function.
Results:

(1) Post PTMC there is a significant reduction in the TR and a significant increase in MR.
(2) Successful PTMC was associated with a significant reduction in the Wilkins score, peak and mean mitral gradient.
(3) Follow-up after 6 months for the peak gradient showed not much difference but there was a significant reduction in the mean gradient.
(4) There is a significant improvement in the mitral valve area which continues even after the period of 6 months.
(5) Right ventricular systolic pressure immediately after PTMC reduces statistically but this reduction is not carried after 6 months.
(6) Post PTMC there is a significant increase in the fractional area change and this increase persists up the period of 6 months.
(7) TAPSE that reflect systolic function of RV, changes significantly after PTMC but this change are not present at 6 months follow-up.
(8) The RV TVI S', E and A values increase immediately after PTMC but there is no sustained improvement after 6 months.

Conclusion: The current study showed a significant improvement in both systolic and diastolic functions of RV as observed by different echocardiographic parameters post BMV.

An unusual complication of mitral valve infective endocarditis in a child

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Aterio-ventricular fistula due to infective endocarditis (IE) involving non-mitral–aortic intervalvular fossa is a rare entity. We present a case of IE of mitral valve complicated by pseudo aneurysm of posterior wall of left atrium (LA) and posterior mitral annulus fistulizing to left ventricle (LV) and LA, best visualized by three dimensional transthoracic echocardiogram (3DTTE).
3-years-old boy presented with past history of completed treatment of IE of mitral valve one-year back. Child was asymptomatic after that. Transthoracic echocardiogram showed hypoechoic cavity in the posterior mitral annulus and posterior wall of left atrium fistulizing to LV through an orifice in mitral annulus suggestive of pseudoaneurysm and had moderate mitral regurgitation. 3DTTE confirmed the presence of mitral annulus pseudoaneurysm fistulizing to LV and LA.

Coronary artery disease prevalence in patients with rheumatic heart disease in Western India

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Background: Although many patients with valvular heart disease have concomitant coronary artery disease (CAD), there are limited data on the association between rheumatic valvular disease (RVD) and CAD. Aim of this study was to determine the prevalence of coronary artery disease in patients with rheumatic heart disease undergoing valve surgery.
Methods and results: Total 188 consecutive patients with rheumatic heart disease who were above the age of 40 years, and scheduled for valve surgery underwent diagnostic coronary angiogram to delineate coronary arteries. The patients were divided into three groups based on valve involvement (mitral valve, aortic valve, and combined aortic and mitral valve). Significant coronary artery disease was considered to be present if one or more coronaries showed 50% or more luminal stenosis. There were 144 (76.5%) males and 44 (23.5%) females. The mean age of the study population was 51.2 ± 8.2 years. 44 (23.5%) patients had typical chest pain, 58 (30.8%) patients had atypical chest pain and 86 (45.7%) patients had no chest pain. Hypertension was noted in 44 (23.4%) patients, 33 (17.5%) patients had diabetes, 49 (26.1%) patients were smoker, and 33 (17.5%) patients had dyslipidemia, and 8 (4.2%) patients gave past history of myocardial infarction. Of the total 188 patients, 23 (12.2%) patients were found to have significant coronary artery disease. In patients with mitral valve disease the prevalence was 14.58% (7/48), while it was 16.1% (10/62) in patients with aortic valve disease and 8.9% (7/78) in those with combined mitral and aortic valve disease.

Table 1 – Baseline characteristics.

Risk factors	Total (*n* = 188)	Male (*n* = 144)	Female (*n* = 44)	*P* value
Chest pain (typical)	44 (23.5)	38 (26.5)	6 (14.6)	0.01*
Chest pain (atypical)	58 (30.8)	47 (32.7)	11 (24.7)	0.09
No chest pain	85 (45.5)	59 (40.8)	27 (60.6)	0.001*
Hypertension	44 (23.4)	36 (25.4)	8 (16.9)	0.06
Diabetes mellitus	32 (17.3)	25 (17.8)	7 (15.7)	0.4
Smoking	49 (26.1)	47 (32.8)	2 (4.5)	0.001*
Dyslipidemia	33 (17.6)	26 (18.1)	7 (15.7)	0.37
Past MI	15 (4.0)	8 (5.5)	7 (15.9)	0.09